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Oceans and the law of the sea

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Available assistance to and measures that may be taken by developing States, in particular the least developed States and small island developing States, as well as coastal African States, to realize the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction

Study prepared by the Secretariat**

Summary

The present material has been prepared in compliance with the request made by the General Assembly in paragraph 88 of resolution 61/222 that the Secretary-General prepare a study, in cooperation with and based on information provided by States and competent international organizations and global and regional funding agencies, on the available assistance to and measures that may be taken by developing States, in particular the least developed States and small island developing States, as well as coastal African States, to realize the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction.

* A/63/150 and Corr.1.

** Owing to the page limit, this study contains a concise presentation of the most important elements of information provided by States and competent international organizations and global and regional funding agencies and of information otherwise available in the public domain.

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I. Introduction

1. In paragraph 88 of its resolution 61/222, the General Assembly requested the Secretary-General to prepare a study, in cooperation with and based on information provided by States and competent international organizations and global and regional funding agencies, on the available assistance to and measures that may be taken by developing States, in particular the least developed States and small island developing States, as well as coastal African States, to realize the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction. The Assembly also requested the Secretary-General to present the study to it at its sixty-third session and to report to it at its sixty-second session on progress in the preparation of the study.

2. In reporting on the progress in the preparation of the study, in the addendum to his report on oceans and the law of the sea (A/62/66/Add.1, para. 161), the Secretary-General informed Member States that, by a note dated 15 January 2007, the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs had requested the permanent missions of Member States to transmit, by the end of May 2007, the information requested in paragraph 88 of resolution 61/222. The Division subsequently sent a similar request to the competent international organizations and global and regional funding agencies (para. 161).

3. In the addendum to his report, the Secretary-General also informed Member States that in response to its note, the Division had received information from Benin (12 July 2007), Germany (8 June 2007), Japan (5 June 2007), Mauritius (7 September 2007), Mexico (14 May 2007), Norway (18 July 2007), Peru (24 August 2007) and Sri Lanka (2 May 2007). The replies received identified the challenges faced and measures taken in realizing the benefits of the sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction. Some States suggested measures to address those challenges and made concrete offers of assistance to potential "partner" developing countries on the basis of their respective experiences in marine development in many regions of the world (A/62/66/Add.1, para. 162). In the addendum to his report, the Secretary-General also pointed out that due to the limited number of responses that had been received at the time of the preparation of the report, the Secretariat was not in a position to make conclusive statements on the prospective content of the study. The Secretariat underlined, however, that any comprehensive study on assistance available to and measures to be taken by developing States was very much dependent on the provision of information by a greater number of States, and also by international organizations and funding agencies (para. 163).

4. In paragraph 102 of its resolution 62/215, the General Assembly took note of the information provided by the Secretary-General relating to the study on the assistance available to and measures that may be taken by developing States, in particular the least developed countries and small island developing States, as well as coastal African States, to realize the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction to be presented to it at its sixty-third session pursuant to paragraph 88 of resolution 61/222, urged States and competent international organizations and global and regional funding agencies to provide further information, and requested that a study be prepared in continuing cooperation with such States and organizations on

the basis of information so provided or disseminated and otherwise available in the public domain.

5. Following the adoption of that resolution, the Division for Ocean Affairs and the Law of the Sea, through letters dated 17 and 29 January 2008, transmitted another request for additional information to States and specialized agencies, programmes and bodies of the United Nations system, as well as other international organizations.

6. In response to those communications, the Division received information from Australia (14 August 2008), Cuba (25 April 2008), Iraq (9 April 2008), Panama (22 May 2008), Spain (13 March and 13 June) and Sri Lanka (9 April 2008). It also received replies from specialized agencies, programmes and bodies of the United Nations system and other international organizations, namely from the Food and Agriculture Organization of the United Nations (FAO) (22 April 2008), the Asian Development Bank (ADB) (23 April 2008), the Basel Convention (12 February 2008), the Convention on Biological Biodiversity (31 March 2008), the International Hydrographic Organization (10 March 2008), the Organization of Eastern Caribbean States (28 February 2008), and the Western and Central Pacific Fisheries Commission (9 June 2008). In addition, the Division undertook extensive research on information disseminated and otherwise available in the public domain.[1]

7. The Secretary-General wishes to express his appreciation for the input provided by the above-mentioned States, specialized agencies, programmes and bodies of the United Nations system and other international organizations. The review of their responses revealed the presence of certain common key elements for the realization by developing States of the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction. Some responses also elaborated on available assistance. In view of the informative value of those responses, they have been posted on the website of the Division for Ocean Affairs and the Law of the Sea (http://www.un.org/Depts/los).

8. Regarding the information available in the public domain, it is recalled that, in the early 1990s, in response to the request of the General Assembly in its resolution 44/26, the Secretary-General prepared a report that identified the needs of States in regard to the development and management of ocean resources and the measures currently taken by States and by the competent international organizations in response to those needs, and suggested methods and mechanisms for maximizing opportunities for the early realization for all States, during the decade beginning in 1990, of the benefits of the comprehensive legal regime established by the United Nations Convention on the Law of the Sea. The response of the Secretary-General

[1] The Division for Ocean Affairs and the Law of the Sea also received replies from the International Oil Pollution Compensation Fund (31 January 2008), the International Whaling Commission (31 January 2008), the Economic Commission for Latin America and the Caribbean (4 February 2008), the Collective Security Treaty Organization (1 February 2008), the Association of Southeast Asian Nations (20 February 2008), the African, Caribbean and Pacific Group of States (22 February 2008), the International Council for the Exploration of the Sea (3 March 2008), the Information Sharing Centre of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (4 March 2008), the International Criminal Police Organization (INTERPOL) (10 March 2008), the Counter-Terrorism Executive Directorate (18 March 2008) and the Helsinki Commission (25 March 2008). These organizations informed the Division that they were not in a position to provide information of any relevance.

consisted of two parts; the first part, the report on the Law of the Sea: realization of benefits under the United Nations Convention on the Law of the Sea: needs of States in regard to development and management of ocean resources, dated 16 November 1990 (A/45/712), provided a review of the needs of States in the development and management of ocean resources under the regime established by the Convention. The second part, a report on the Law of the Sea: realization of benefits under the United Nations Convention on the Law of the Sea: measures undertaken in response to needs of States in regard to development and management of ocean resources, and approaches for further action, dated 4 December 1991 (A/46/722), provided an overview of measures taken by States and competent international organizations and, in response to the needs identified, dealt with methods and mechanisms for maximizing the opportunities of States for the realization, during the 1990s, of the benefits of the new ocean regime. Those reports still represent a valuable source of information that is of direct relevance to the topic of the study requested by the Assembly in its resolution 61/222.

9. In addition to those referred to above, a number of other reports of the Secretary-General address the availability of assistance to and measures that may be taken by developing States, in particular the least developed States and small island developing States, as well as coastal African States, in the context of realization of the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction. Those reports are those that deal in particular with sustainable fisheries issues, among them the report on the status and implementation of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (1995 United Nations Fish Stocks Agreement) and its impact on related or proposed instruments throughout the United Nations system, with special reference to implementation of part VII of the 1995 United Nations Fish Stocks Agreement dealing with the requirements of developing States (A/58/215), the reports on sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Fish Stocks Agreement and related instruments, and the reports on large-scale pelagic drift-net fishing, unauthorized fishing in zones of national jurisdiction and on the high seas, fisheries by-catch and discards, and other developments [2]

10. Other relevant documents are the reports of the Secretary-General on oceans and the law of the sea (available at http://www.un.org/Depts/los) and the reports on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its meetings[3] and other material emanating from those meetings.

11. Finally, the Division for Ocean Affairs and the Law of the Sea has identified reference material, including reports, studies and documents produced by the specialized agencies and the programmes and bodies of the United Nations system and other international organizations and by non-governmental organizations, as

[2] See, in particular, A/51/404, A/52/557, A/53/473, A/55/386, A/57/459, A/58/215, A/59/298, A/60/189 and A/62/260.

[3] See A/55/274, A/56/121, A/57/80, A/58/95, A/59/122, A/60/99, A/61/156, A/62/169 and A/63/174.

well as articles produced by experts in the fields of ocean affairs, international governance, sustainable development, coastal zone management and marine environment. Owing to the page limitation of the present study, a list of this reference material has been made available online (http://www.un.org/Depts/los).

12. Regarding the major requirements of States for the development of the ocean sector, the in-depth review contained in the report of the Secretary-General dated 16 November 1990 (A/45/712) correctly observed that the applicability of the needs to any particular country would depend on the degree of its progress in marine sector development. Similar to the early 1990s, a disparity continues to exist in national experience. The needs of countries continue to range from the basic needs of those countries which have not yet been in a position to take any substantial measures to develop the ocean potential provided by the Convention to the needs of those developing countries which have developed some capabilities and have taken initiatives in securing jurisdiction over their extended maritime zones, adopting ocean development policies and implementing programmes and projects.

13. Nevertheless, since the early 1990s, there have been shifts in needs, priorities and development goals, and new problems and challenges at the global, regional and national levels have emerged, and the needs have evolved together with those challenges. The present priorities and challenges correspond to a large extent to major themes selected for review by the General Assembly in the context of the meetings of the Consultative Process. Among them are: sustainable fisheries and illegal, unregulated and unreported fisheries; the protection and preservation of the marine environment, especially in coastal areas; marine science; the development and transfer of marine technology as mutually agreed; capacity-building, including the protection of vulnerable marine ecosystems; integrated ocean management; safety of navigation; new sustainable uses of the oceans, including the conservation and management of biological diversity; marine debris; as well as issues related to climate change and sea level rise and mitigation of the impact of natural disasters.

14. Recent developments cannot but reinforce one of the main conclusions of the review prepared in response to the request contained in General Assembly resolution 44/26, namely that the development and management of ocean resources and activities call for a coordinated, centralized and highly sophisticated development response and that the true solution is an effectively integrated national ocean resource policy. National policy formulation and decision-making in ocean resource development and management require improved global knowledge and awareness of the interrelation of complex issues. In formulating national policies, Governments will continue to face an ever increasing variety of rights and concomitant duties, with a larger range of governmental and international activities, involving many sectors and encompassing diverse disciplines. Thus, the main prerequisite for the implementation of any of the measures intended to realize the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction is improved governance at the national level, with project management know-how, which facilitates the receipt of available assistance.

15. It also appears that another observation contained in the above-mentioned review has maintained its relevance, namely that although the rights conferred under the Convention on the Law of the Sea are balanced by corresponding obligations, there is a tendency to secure and exercise the rights but to relegate the fulfilment of obligations to a place of secondary importance. There is a continued need for

awareness of this situation and for corrective action at the national level, as appropriate.

16. The enjoyment of rights and compliance with duties cannot be effected in a piecemeal fashion. They can be addressed only through coordinated and concerted action on a number of fronts. The demands for formulating an integrated marine or ocean policy and for the development of a coordinated response flow also from the resource development potential and its prospective contribution to national economies. It also remains true that the many and varied activities that States have to undertake as a consequence of the legal regime, as reflected in the Convention, require that the development of ocean resources should provide a balance among multiple uses and between environmental protection and development and should deal with the necessary trade-offs involved in establishing national priorities.

17. It has been determined, following a thorough review and analysis of the information obtained, that the general conclusions of the in-depth global review prepared in response to the request contained in resolution 44/26 remain valid to a large extent. Therefore, to meet the objectives of paragraph 88 of resolution 61/222, the format of the present study is action-oriented and focuses on providing an overview of the reported sources of assistance available to developing States and on the identification of specific measures which may be taken by States.

18. This approach has been facilitated largely by the fact that there is already a wealth of conclusions and recommendations available, including those which have been agreed upon by States and are contained in General Assembly resolutions on oceans and the law of the sea. As a matter of fact, the reports of the Secretary-General, together with material emanating from the meetings of the Consultative Process, document progress made by States and the international community as a whole since the early 1990s, as well as the current need for assistance.

19. The present study does not purport to cover all issues and all areas. In the identification of priorities, it has been guided to a great extent by the input received from States. It is hoped that through, inter alia, the deliberations in the General Assembly on matters related to oceans and the law of the sea, as well as sustainable fisheries, developing States would provide further feedback from various national ministries and agencies in the implementation, in relation to their national experience with regard to measures in the key areas of sustainable development of marine resources, for example, fisheries, offshore oil and gas, marine minerals, ports and harbours, ocean transportation and coastal recreation, among others, as well as relevant feedback emanating from civil society, including private enterprise, academia and research organizations.

II. Assistance available to developing States

20. **Bilateral and multilateral donors**. On numerous occasions it has been stated that bilateral and multilateral donors should keep their capacity-building programmes under review to ensure that developing countries, and especially the least developed countries, and those that are landlocked, have the ability both to implement the United Nations Convention on the Law of the Sea and to benefit from the many possibilities for the sustainable development of their resources which it offers, and the need to ensure that small island developing States can have access to the full range of skills essential for those purposes. Those programmes should take

full account of the importance of promoting the capacities and skills needed for sustainable management of the oceans and seas in accordance with the Convention as part of their efforts to eradicate poverty and ensure food security.

21. In their input to the study, several developed States and international organizations elaborated on cooperation and assistance projects aimed at capacity-building with a view to enhancing the management of marine resources by developing States. For details on the assistance provided by Member States and international organizations, refer to the website of the Division for Ocean Affairs and the Law of the Sea (http://www.un.org/Depts/los).

22. **Australia**. Australia's contribution outlined and briefly explained the assistance relevant to paragraph 88 of resolution 61/222. For example, in November 2007, the Australian Agency for International Development released the document entitled "Valuing Pacific Fish — a framework for fisheries-related development assistance in the Pacific". The document sets out an approach to the development of sustainable coastal and oceanic fisheries in the Pacific.

23. Australia also provides assistance to fisheries-related regional organizations in the region of the Pacific — Pacific Islands Forum Fisheries Agency and the Marine Resources Division of the secretariat to the Pacific Community. The Department of Defence of the Government of Australia manages the development and implementation of the Pacific Patrol Boat Programme.

24. Australia has also strong programmes of bilateral assistance, such as fisheries-related funding programmes or institutional strengthening programmes in the small fisheries-dependent States in the central region of the Pacific. It also provides support to developing States in the preparation of submissions on the outer limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured to the Commission on the Limits of the Continental Shelf.

25. **Germany**. In its contribution, Germany highlighted a number of bilateral programmes of assistance, in particular in South-East Asia and in Africa.

26. **Japan**. Japan, in particular, underlined its involvement in projects that aim to improve human resources and systems through training and the provision of essential equipment, such as the programme that strengthens the capacity-building assistance in tuna resource management in the Pacific Island States.

27. Japan is taking the lead in this area, in particular in establishing statistical infrastructures concerning tuna fishing in coastal developing States in the Pacific Ocean. As the Government of Japan has pointed out, developing States joining the International Commission of Atlantic Tuna have been increasing with a consequence of insufficiency of statistical information on the total catch, together with the problem of an inappropriate evolution of resources.

28. **Norway**. Norway has highlighted bilateral development cooperation in the area of marine fisheries resources management benefiting countries in Africa, Asia and Central America. Norwegian multilateral support is mainly directed through FAO, that is, for the implementation of the Code of Conduct for Responsible Fisheries in countries in the developing world that are members of FAO. Norway also supports the United Nations trust fund set up for capacity-building and

technical assistance in relation to the implementation of the 1995 United Nations Fish Stock Agreement.

29. The Norwegian Oil for Development initiative aims at assisting developing States in their efforts to translate petroleum resources into improved welfare for the inhabitants to improve their international development performance indices. The initiative builds on three main thematic pillars: resource management; revenue management; and environmental protection. Good governance, transparency and accountability are important cross-cutting dimensions.

30. **Spain**. In an effort to assist the fisheries and aquaculture sector of developing countries in achieving sustainable development and in implementing and monitoring compliance with the necessary regulations, Spain has signed memorandums on fisheries and aquaculture cooperation with a number of States in Africa, Asia and Latin America.

31. **Asian Development Bank**. In 2007, six core member countries of the Coral Triangle Initiative requested ADB to help facilitate financing for the Initiative in cooperation with the Global Environment Facility. At present, the Pacific Region Department of ADB is processing regional technical assistance on Coastal and Marine Resources Management in the Coral Triangle of the Pacific.

32. **Convention on Biological Diversity**. In its contribution, the secretariat of the Convention on Biological Diversity highlighted, among other things, the availability of an Internet-based clearing-house mechanism (see http://www.cbd.int/marine/seabed.shtml) through which information on research activities related to deep seabed genetic resources beyond the limits of national jurisdiction is compiled and disseminated.

33. **Food and Agriculture Organization of the United Nations**. FAO has provided extensive information on its activities to assist coastal developing States, in particular with respect to the African, wider Caribbean and South Pacific regions. In Africa, FAO assistance was channelled through some States, subregional fisheries bodies and the Fishery Committee for the Eastern Central Atlantic, which covers 22 of such States on the Atlantic coast.

34. **International Hydrographic Organization**. Regarding the scientific research for maritime operations, the International Hydrographic Organization, in consultation with other relevant international organizations, provides necessary assistance to States, in particular to developing countries, where the lack of hydrographic capability undermines the safety of navigation, the protection of the marine environment or the enforcement of laws against piracy and armed robbery at sea.

35. **Western and Central Pacific Fisheries Commission**. The Commission established a special requirements fund, which is financed by voluntary contributions, to address certain provisions of its Convention (see http://www.wcpfc.int).

III. Measures that may be taken by developing States

36. It is noted that not all of the experience and practices of developed States may be directly transferable and that each of the measures provided in the present

compilation has to be assessed in the specific national context, taking into account the need for an integrated approach as well as international cooperation.

37. The primary focus of the present study is on national measures; thus, the compilation intentionally omits references to steps that may need to be taken within regional and global organizations, programmes, bodies and arrangements. However, at each step States should bear in mind that the potential benefits from the marine sector are substantially enhanced when bilateral, subregional and regional cooperation arrangements are in place. Consequently, it is understood that most of the proposed measures need to be implemented in the context of and taking into account the bilateral, subregional, regional and global instruments and mechanisms of cooperation. Listed below are suggestions for measures to be adopted by developing States in order to realize the benefits of the sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction. A substantial part of the suggestions was derived from information submitted by States in preparation of this report combined with information available in the public domain, including suggestions for major measures that have been identified in policy instruments. Also, the approach taken was to include measures that address the broadest possible range of issues that may have a direct and indirect impact on the realization of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction.

38. It is hoped that the consolidated list of a number of measures would be used also by donor States, competent international organizations and global and regional funding agencies when considering the expansion of their programmes within their respective fields of competence for assistance to developing countries and in coordinating their efforts, including in the allocation and application of various sources of funding.

39. The measures that may be taken by developing States, in particular the least developed States and small island developing States, as well as coastal African States, to realize the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction, organized by categories of activities, are listed below.[4]

A. Legal and policy framework

(a) Ratify or accede to and effectively implement the United Nations Convention on the Law of the Sea and its implementing agreements, as well as other relevant global and regional instruments, and comply with relevant policy and/or voluntary instruments;

(b) With regard to sustainable fisheries, ratify or accede to and effectively implement the 1995 United Nations Fish Stocks Agreement, the 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, and, where appropriate, regional fisheries management agreements or arrangements;

[4] The list is neither comprehensive nor intended to reflect all the measures identified in policy instruments, such as those agreed upon by the General Assembly, which are already contained in relevant resolutions. It is understood that all measures should be implemented in accordance with international law, in particular the United Nations Convention on the Law of the Sea.

(c) Comply with the 1995 Code of Conduct for Responsible Fisheries of FAO and its international plans of action;

(d) Ratify or accede to and effectively implement maritime safety and security instruments, including the 1993 Protocol to the Torremolinos International Convention for the Safety of Fishing Vessels and the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation and its Protocols;

(e) Adopt legislation to ensure that there is a proper framework for responses to incidents of piracy and armed robbery at sea in coordination with the approach adopted by other States in the region;

(f) Establish a national framework, including national legal systems and structures, that will foster the implementation of measures contained in international instruments, in conformity with the applicable legal regime, in particular the United Nations Convention on the Law of the Sea;

(g) Enforce the provisions of the Convention and the 1995 United Nations Fish Stocks Agreement, including those relating to enforcement measures, such as boarding, inspection, arrest and judicial proceedings, in particular to deter unauthorized fishery in the exclusive economic zone;

(h) Implement the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities, including through the development of regional and national plans of action;

(i) Promote good governance for successful sustainable development, for example, root out corruption, uphold human rights and adhere to the rule of law.

B. Ecosystem and integrated approaches

(a) Consider implementing ecosystem approaches, in accordance with relevant decisions of the General Assembly and other relevant institutions (see also para. 119 of resolution 61/222);

(b) Implement, at the national level, integrated processes which would allow all the sectors concerned with ocean affairs to contribute in formulating policy and making decisions;

(c) Coordinate, at the national level, strategies and approaches presented by governmental agencies in different international forums so as to avoid fragmentation of decision-making on the ocean issues;

(d) Adopt an integrated approach to national marine policy, including for the protection of marine and coastal areas, in accordance with programme area A of chapter 17 of Agenda 21 and the Johannesburg Plan of Implementation, which encourages the application by 2010 of the ecosystem approach (see para. 30 (d));

(e) Take steps to promote public awareness and participation, including through promoting ocean-related studies within their educational systems, creating networks of practitioners and other stakeholders, and eliminating obstacles to good governance at all levels, including through international cooperation and involving other States, agencies of the United Nations system, non-governmental

organizations and the private sector, at the regional level and through networks of regional organizations;

(f) Integrate the protection of marine and coastal areas into policies for key sectors and mobilize resources for this purpose from domestic and international sources;

(g) Consider identifying a focal point for coordination and cooperation on issues relating to oceans and seas and provide details thereon to the United Nations Secretariat so that they can be made available in the same way for focal points within the United Nations system;

(h) Improve, as appropriate, legal and policy frameworks to support and facilitate the application of the precautionary and ecosystem approaches;

(i) Implement modern sectoral management and intersectoral coordination with a view to improving coordination and cooperation at the national level;

(j) Adopt measures for improved law enforcement, monitoring and surveillance;

(k) Encourage adaptive management and enforcement and transparency and accountability;

(l) Consider stakeholders' interests at the level of single-species management, not only at the level of multispecies management;

(m) Allow for meaningful stakeholder participation, through public education, including for local communities, in favour of conservation and sustainable use of ecosystems;

(n) Develop, raise and sustain public awareness and institutional and political will;

(o) Provide or discern information on the short- and long-term market and non-market gains from the adoption of an ecosystem approach (or the costs of inaction) in order to obtain local support for measures aimed at actually restricting certain activities;

(p) Inform local populations of the rationale for taking certain measures, in particular where the implementation of such measures would result in restrictions of access to certain natural resources;

(q) Use incentives to gain industry and community support, for example, through stakeholder involvement in experimental closure of areas, setting objectives and identifying success criteria, as well as through the issuance of permits and rights-based fisheries systems;

(r) Establish participatory management strategies, such as co-management and community-based management, to ensure greater stakeholder participation and devolution of responsibility, in particular in the fisheries sector.

C. Sustainable fisheries, in particular measures to prevent, deter and eliminate illegal, unreported and unregulated fishing

(a) Fully comply with all existing obligations and to combat illegal, unreported and unregulated fishing, including through relevant regional and subregional fisheries management organizations and arrangements;

(b) Establish or improve the national system for monitoring, control and surveillance in the respective area of maritime jurisdiction to ensure compliance with the relevant national and international regulatory frameworks in general and in particular to combat illegal, unreported and unregulated fishing;

(c) Adopt fair, transparent and non-discriminatory measures that will serve to deter illegal, unreported and unregulated fishing at the national, regional and international levels, following the framework of the FAO Model Scheme on port State measures;

(d) Adopt port States measures with respect to vessels involved in illegal, unreported and unregulated fishing and to address the use of flags of convenience in fishing operations — it is recalled that FAO is developing a draft agreement on port State measures to prevent, deter and eliminate illegal, unreported and unregulated fishing;

(e) Adopt market-related measures in accordance with international law, including the principles, rights and obligations established by World Trade Organization agreements, as called for in the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing in relation to fish and fisheries products derived from illegal, unreported and unregulated fishing and to address the use of flags of convenience in fishing operations;

(f) Address the role of companies engaged in illegal, unreported and unregulated fishing and the use of flags of convenience and related activities, wherever they might occur;

(g) Establish mandatory vessel monitoring, control and surveillance systems for fishing vessels, including the sharing of information on fisheries enforcement matters;

(h) Expand the use of negative vessel lists to identify products from illegal, unreported and unregulated catches and, where possible, to establish tracking and verification mechanisms to do so;

(i) Promote, consistent with national law, the establishment of positive and negative lists of vessels fishing within areas covered by regional fisheries management organizations and arrangements to assist in the determination of compliance with conservation and management measures and encourage improved coordination among all parties to share and use this information;

(j) Establish sanctions for non-compliance by vessels flying the State's flag and by nationals that are adequate in severity to effectively secure compliance, deter further violations and deprive offenders of the benefits deriving from their illegal activities;

(k) Revise national fisheries policy and regulatory framework to ensure the sustainable and equitable use of fisheries resources;

(l) Strengthen all relevant national institutions involved in fisheries management with regard to their organizational, managerial, technical and financial abilities to foster adequate steering capacities;

(m) Review and strengthen the national system for the delivery of relevant services with regard to fisheries management to ensure effective and efficient services delivery to the respective clients within the sector;

(n) Provide appropriate infrastructure for post-harvest facilities (for seafood landings, storage, transportation and processing) to maximize the potential benefits from the sector;

(o) Conduct, in cooperation with FAO and regional fisheries management organizations, national awareness programmes on the implementation of existing principles, rules and guidelines on the conservation and sustainable utilization of living marine resources;

(p) Eliminate governmental subsidies that lead to excessive fishing activity, in accordance with the work of the World Trade Organization in this field;

(q) Adopt a long-term harvesting strategy, in collaboration with the fishing industry, which involves a substantial reduction in harvested stocks;

(r) Establish a committee, composed of members from the fishing industry (vessel owners and crew) and from the public sector, with a mandate to combat discards, fishing in excess of vessel quotas and "black landings";

(s) Involve the fishing industry in the development of rules as well as in the negotiation of international agreements;

(t) Participate in and support regional fisheries management organizations to enhance regional collaboration;

(u) Promote the implementation of modern approaches to fisheries management within regional fisheries management organizations, relying on the best scientific information available and application of the precautionary approach, incorporating an ecosystem approach to fisheries management and biodiversity considerations to ensure that they effectively contribute to long-term conservation and management and sustainable use of marine living resources, in accordance with resolution 62/177;

(v) Address the impacts of bottom fishing on vulnerable marine ecosystems, in accordance with resolution 61/105;

(w) Seek greater participation of coastal States in fisheries activities being undertaken by distant-water fishing nations within the exclusive economic zone in order to achieve better economic returns from their fisheries resources and an enhanced role in regional fisheries management;

(x) Request distant-water fishing nations, when negotiating access agreements and arrangements, to do so on an equitable and sustainable basis, including by giving greater attention to catch processing within the national jurisdiction to assist in the realization of benefits from the development of fisheries resources;

(y) Create an enabling environment, in cooperation with FAO, for small-scale fisheries, including the development of a code of conduct and guidelines for

enhancing the contribution of small-scale fisheries to poverty alleviation and food security, and encourage studies for creating possible alternative livelihoods for coastal communities;

(z) Make small-scale fisheries a priority subsector in national development plans and in regional development programmes, and ensure that information on the potential of small-scale fishing to meet household and national food security targets is broadcast;

(aa) Promote long-term partnerships between public and private organizations geared towards upgrading the secondary sector to develop high-quality traditional fishery products for national and regional consumption;

(bb) Implement community-based measures, including the restriction of destructive fishing practices, temporal and spatial closures, as well as monitoring, surveillance and control measures;

(cc) Encourage fisheries development through joint ventures with other States;

(dd) Encourage enhanced science for conservation and management measures that incorporate and strengthen ecosystem considerations, including through implementation of the Strategy for Improving Information on Status and Trends in Capture Fisheries and a greater reliance on scientific advice in adopting such measures;

(ee) Strengthen relevant national scientific research institutions with regard to fisheries management to build the necessary academic facilities, capacities and abilities for essential education as well as research;

(ff) Seek greater assistance from States in designing, establishing and implementing relevant agreements, instruments and tools for the conservation and sustainable management of fish stocks, including the enhancement of research and scientific capabilities through existing funds, such as the Assistance Fund under Part VII of the 1995 United Nations Fish Stocks Agreement, bilateral assistance, regional fisheries management organizations and arrangements assistance funds, the FAO FishCode programme, the World Bank's global programme on fisheries and the Global Environment Facility.

D. Mineral resources

(a) Seek to agree, through regional seas conventions and action plans in regions where offshore oil and gas industries are developing or are in prospect, on the developments of programmes and/or measures to prevent, reduce and control pollution from offshore installations;

(b) Involve the oil and gas industry in the development of guidance on the best environmental practices to prevent and control pollution from accidents on offshore installations and to mitigate their effects.

E. Protection and preservation of the marine environment

(a) Develop and facilitate the use of diverse approaches and tools for conserving and managing vulnerable marine ecosystems, including the establishment of marine protected areas, consistent with international law and based on the best scientific information available, in accordance with paragraph 32 (c) of the Johannesburg Plan of Implementation;

(b) Compile scientific and ecological criteria, inter alia, for the identification of areas for protection, taking into account those already developed by relevant organizations;

(c) Combat marine pollution and degradation from land-based activities, in an integrated and inclusive manner, in the preparation, implementation and revision of the national sustainable development strategy, including local Agenda 21 programmes;

(d) Ensure that both investment in combating marine pollution and degradation from land-based activities are given adequate attention in investment programmes, in the light of the objectives of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, and the economic, social, environmental and human-health impacts of possible adverse effects on the marine environment from new developments are taken into account when assessing and evaluating proposed development programmes and projects;

(e) Develop regional and national plans of action to give effect to the Global Programme of Action;

(f) Conduct environmental education programmes and efforts to educate polluting industries in order to clean up the coastal regions in which they are located;

(g) Formulate, with the assistance of international and regional organizations, arrangements to include handling of incidents which could result in major pollution of the marine environment;

(h) Ensure that policymakers have a sound understanding of the oceans and of the importance of the marine environment, and achieve adequate capacity to acquire and use the necessary information and to manage effectively the State's interests in the oceans and seas;

(i) Cooperate with States of the region with a view to enhancing regional action to prevent, reduce and control pollution and to commit resources to such work and endorse such commitments at a high political level;

(j) Take active part in regional conventions and in action plans on seas in order to develop regionally shared goals and timetables in pursuance of the Global Programme of Action;

(k) Mobilize regional conventions and action plans on seas with a view to obtaining assistance, where necessary, in developing the components addressing municipal wastewater of their national action plans under the Global Programme of Action;

(l) Develop national and regional plans for responding to emergencies that threaten marine pollution arising from accidents on such offshore installations;

(m) Develop partnerships with industry and civil society to raise awareness of the extent of the impact of marine debris on the health and productivity of the marine environment and consequent economic loss;

(n) Integrate the issue of marine debris into national strategies dealing with recycling, reuse and reduction and promote the development of appropriate economic incentives to address this issue, as decided by the General Assembly (see resolution 60/30, para. 66);

(o) Cooperate on the regional and subregional levels to develop and implement joint prevention and recovery programmes;

(p) Address, in cooperation with States and FAO, the issue of lost and discarded fishing gear and related marine debris;

(q) Analyse the implementation and effectiveness of the existing measures relevant to the control and management of derelict fishing gear and related marine debris;

(r) Establish and maintain national inventories of net types and other gear used by fisheries within national jurisdictions;

(s) Organize the regular, long-term collection, collation and dissemination of information on derelict fishing gear found within national jurisdictions;

(t) Develop and implement targeted studies to determine the socio-economic, technical and other factors that influence the accidental loss and deliberate disposal of fishing gear at sea;

(u) Assess preventive measures, incentives and disincentives relating to the loss and disposal of fishing gear at sea;

(v) Conduct, in accordance with national legislation and international law, assessments in relation to marine activities likely to have a significant impact on the environment;

(w) Undertake targeted action to address activities that can undermine the conservation and integrity of marine ecosystems;

(x) Develop mechanisms to monitor and review ecosystem health and management effectiveness;

(y) Take full advantage of the regional seas programme of the United Nations Environment Programme to craft a regional approach in order to protect the environment and to manage natural resources and to address the accelerating degradation of the world's oceans and coastal areas through sustainable management and use of the marine and coastal environment by engaging neighbouring countries in comprehensive and specific actions to protect their shared marine environment.

F. Biodiversity and marine genetic resources

(a) Cooperate and coordinate efforts at the subregional and regional levels and take, individually or jointly, as appropriate, all measures, in conformity with international law, including the United Nations Convention on the Law of the Sea and other applicable instruments, to address impacts on marine biodiversity;

(b) Conduct biological surveys to obtain information that will enhance the knowledge of resources and seas in order to support naval operations and promote the protection of marine ecosystems;

(c) Inspect and monitor activities along the coastline in order to promote the protection of marine ecosystems and conserve living marine resources;

(d) Enhance cooperation with other States and relevant international bodies in the protection and preservation of coral reefs, mangroves and seagrass beds, including through the exchange of information;

(e) Mainstream coral reef management approaches into national development strategies;

(f) Recognize the value of marine genetic resources in terms of benefits, goods and services they can provide, as well as the importance of research on marine genetic resources for the purpose of enhancing the scientific understanding, potential use and application, and enhanced management of marine ecosystems;

(g) Support and promote capacity-building activities that deal with the issue of scientific research, particularly in developing countries, as set forth in resolution 62/215;

(h) Reduce unnecessary regulatory burdens, including ensuing transaction costs at the national level, in order to make research related to marine genetic resources within national jurisdiction more attractive;

(i) Provide legal certainty in the collection process (owing to downstream commercial risk), especially concerning ownership, protection of investment and well-defined benefit-sharing arrangements, through, for example, codes of conduct, standards and memorandums of understanding, in accordance with the Convention on Biological Diversity;

(j) Develop clear national regulations for the collection of samples by foreign actors, providing for the issuance of permits and support of the sharing of research results on the basis of the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization;

(k) Ensure that activities with respect to marine genetic resources that take place under national jurisdiction or control are conducted sustainably, taking into account the ecosystem approaches and the precautionary approach;

(l) Take appropriate steps towards fair, transparent, predictable and effective frameworks for accessing marine genetic resources in areas under national jurisdiction, recognizing the mutual need among researchers, commercial interests and local communities for such frameworks;

(m) Encourage relevant organizations, institutions and researchers to consider adopting, as appropriate, codes of conduct, standards and technical guidelines for the sustainable exploration and sampling of marine genetic resources;

(n) Promote further scientific cooperation and multidisciplinary research efforts, partnerships and public and private joint ventures in order to encourage research related to marine genetic resources.

G. Research needs and marine scientific research

(a) Adopt, as appropriate and, in accordance with international law, the national laws, regulations, policies and procedures needed to promote and facilitate marine scientific research;

(b) Ensure that the results of marine science can be understood, assimilated and used by decision makers and resource managers, and that decisions drawing on marine science take, where applicable, full account of socio-economic factors and traditional ecological knowledge;

(c) Seek exchanges of experience among public officials from neighbouring States, with the assistance of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, FAO and other relevant international bodies, in the context of the collaborative work of regional fisheries, environmental and scientific bodies;

(d) Ensure that planning of marine science projects is based upon the specific circumstances and needs of the local communities and national priorities and takes account of the strategies developed by regional intergovernmental cooperation and the global context;

(e) Sustain efforts towards developing the necessary skilled personnel, both by encouraging individuals to engage in marine science and by providing the necessary training and experience, including under the possibility of serving as observers under the right referred to in article 249 of the United Nations Convention on the Law of the Sea of the coastal State to participate or be represented on board research vessels;

(f) Initiate dialogues at the national, regional and global levels, as appropriate, between those responsible for marine policy decisions and those responsible for organizing marine scientific research programmes, in order to establish, within each appropriate area, the issues on which scientific advice is needed and the best means to provide it, taking particular account, in international cooperation, of the issues important to coastal developing States and their needs for capacity-building and transfer of technology;

(g) Establish appropriate arrangements for submitting the data to relevant national, regional or global data centres, in the context of marine scientific research and monitoring projects;

(h) Give consideration to the appropriate level of quality assurance for the data;

(i) Ensure that marine scientific projects are, from the start, aimed at the effective use of the information generated and are therefore designed in such a way, and are accompanied by such capacity-building and transfer of technology;

(j) Focus marine science projects on: delineating ecosystem boundaries, identifying key ecosystem functions and components, integrating scientific, technical and socio-economic information, developing predictive models and risk assessment, developing performance indicators and assessing the state of ecosystem health, especially in the context of integrated management of ocean affairs; fisheries conservation and management; impacts of pollution on fragile ecosystems; the role of fisheries in the socio-economic welfare; ways of controlling and preventing

unsustainable fishery; ballast water and its impacts on the marine environment; dumping of wastes, hazardous wastes and radioactive and chemical wastes; dismantlement of ships; marine pollution in coastal areas and its effects on agriculture and freshwater; study of sustainable harvest and the dynamic nature of exploited marine species and stocks; exploration of the impacts of ocean harvest on ecosystems, taking into account natural environmental fluctuations and the impact of pollutants on the marine ecosystem, its rational exploitation and other marine ecosystem services; and coral reef conservation and fisheries and the coral reef ecosystem (for details on national and multilateral initiatives, existing or under development, refer to the website of the Division for Ocean Affairs and the Law of the Sea at http://www.un.org/Depts/los);

(k) Encourage and support marine scientifi research, in areas within and beyond national jurisdiction, in accordance with international law;

(l) Consider taking part in existing international efforts, such as the work of the Census of Marine Life and other ongoing relevant partnerships and initiatives, including those within the United Nations system, to systematically collect and integrate marine scientific data and information and make it publicly available, in accordance with international law, including the Convention on the Law of the Sea;

(m) Promote regional on board research programmes under the aegis of the United Nations to assist coastal States with large maritime zones.

H. Maritime transport and navigation

(a) Undertake efforts with a view to establishing an updated institutional tidal network to obtain reliable tide prediction information for coastal navigation particularly in restricted waters, canals, bays and roadsteads, and to monitor the sea level nationally;

(b) Implement, as a matter of priority, national legislation consistent with the United Nations Convention on the Law of the Sea and other relevant agreements for the benefit of world sea-borne trade;

(c) Promote investments in modern ships through fiscal policies that encourage investment, such as rapid depreciation allowances, investment credits and reducing personal income taxes for seafarers;

(d) Upgrade maritime safety and environment administration by advanced training through the International Maritime Organization (IMO) and through specialized training and academic institutions;

(e) Encourage the development of ship repair facilities through favourable fiscal policies and custom exemption for essential equipment and ship components;

(f) Provide and upgrade reception facilities for ship waste;

(g) Support port infrastructure investments through direct loans or by guaranteeing loans from development agencies;

(h) Gradually phase out existing over-age vessels and ban imports of ships older than 15 years that cannot meet minimum IMO safety regulations;

(i) Actively participate in meetings of the United Nations Conference on Trade and Development and IMO that pertain to global shipping policy, port development and maritime safety/pollution;

(j) In the absence of an effective maritime administration and appropriate legal frameworks, establish or enhance the necessary infrastructure, legislative and enforcement capabilities to ensure the effective implementation and enforcement of flag State responsibilities, and until such action is undertaken, consider the possibilities of declining the granting of the right to fly the flag to new vessels, suspend their registry or to not open a registry;

(k) Take all measures consistent with international law necessary to prevent the operation of substandard vessels, in particular those engaged in illegal, unreported and unregulated fishing activities.

I. Information systems

(a) Facilitate the availability, transparency and harmonization of scientific data within the Government and scientific bodies so that decision-making can be based more readily on scientific information;

(b) Monitor the state of ecosystems supported by the use of data-collection systems, analysis and modelling to inform future management approaches;

(c) Disseminate information to the public on activities that negatively affect ecosystems and the ocean environment and their associated products;

(d) Design profiles of coastal areas with emphasis on vulnerabilities and potential hazards to generate the data for an adequate disaster risk management;

(e) Strengthen information systems in the form of conventional and geo-referential digital efficient flow of data and information;

(f) Compile a biological reference collection that registers the history and biodiversity of biological species in a given area/region is a fine informational tool to track down the changes and variations happening in a specific area/region;

(g) Compile and keep up to date an oceanographic database which contains data on physical, chemical and geological oceanography;

(h) Enhance international cooperation for the gathering of fishery statistics, in particular in developing countries; an improvement in statistical information is also needed;

(i) Design coastal area profiles with an emphasis on vulnerabilities and potential hazards as well as their consequences from natural events and disasters (for example, storms, tidal waves and sea-level rise) to generate the relevant baseline data for an adequate disaster risk management.

J. Capacity-building

(a) Use advisory visits from donors as instruments to raise awareness and decide on the needs and requirements for capacity-building and training support to address specialized needs and requirements in relation to specific topics;

(b) Focus on the development of human resources and seek the assistance of bilateral, regional and international financial organizations and technical partnerships to enhance capacity-building activities for the transfer of environmentally sound technology associated with the sustainable development of marine resources, in particular in developing countries;

(c) Establish focal points for capacity-building and for receiving technical assistance from other States, international financial institutions and relevant intergovernmental organizations and bodies for fishers, in particular small-scale fishers, consistent with environmental sustainability;

(d) Promote training and careers in taxonomy for the classification of marine organisms in research, data integration and conservation, in order to address the shortage in taxonomic expertise, particularly in developing countries;

(e) Focus capacity-building projects, as appropriate, on the integrated management of river basins and the coastal zone, and the development of an ecosystem approach;

(f) Seek capacity-building assistance with a view to raising awareness and implement improved waste management practices.